OLIGOPOLY AND INTERNATIONAL DISISION OF LABOUR

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PREFACE

Orthodox economists have not dealt with the theoretical problemns of international trade under monopolistic conditions.

For example Professor G. Haberler has referred to the probleme of monopoly as a part of trade policy, not as an integral part of trade theory (C. Haberler, The theory of International Trade, English edition, Part II Trade Policy, Chapter XVIII, Dumping, Cartels, Monopolies and Export Bounties).

Another example is found in "International Economics" by Professor R. Harrod. He criticizes the classical writers as follows:

"Classical writers on economics were in the habit, when discussing monopoly, of dismissing it as an exceptional phenomenon. This attitude is out of date for two reasons, first because of the great growth since their day of monopolistic combinations of various kinds, whether mergers, trusts, cartels or gentlemens, agreements, and secondly because the theoretic analysis of monopoly and competition has revealed that both monopoly and competition are limiting concepts, abstractions, relating to conditions not always realized in practice, and that most industries work in conditions which are and admixture of those represented by the two concepts. Thus a large sphere which the classical writers thought of as competitive is in fact only so in a partial sense" (R. Harrod, op. cit., 1959, p. 49).

In spite of this criticism, Professor Harrod has not developed the theoretical problems of international trade under monopolistic conditions. He has only referred to them as the case of the failure of adjustment to comparative real costs.

In short the theoretical problems of international trade under monopolistic conditions have not been studied sufficiently.

In this essay we have tried to develop these problems in the light of recent advance of studies on monopoly. We expect frank and severe criticisms from the readers, and hope to work out the whole analysis anew in the future.

1-INTRODUCTION

1) Historical Realities

In his last book, "Patterns of Trade and Development" (1959), the late Professor R. Nurkse referred to the current lag in exports of non-industrial countries.

According to his tableau economique of world trade (at the time of 1957) the exports of industrial countries to each other occupy 43% of the world trade. The share of the exports of industrial to non-industrial countries is 26%, while that of the exports of non-industrial to industrial countries is 22%. Lastly the exports of non-industrial countries to each other occupy only 9%.

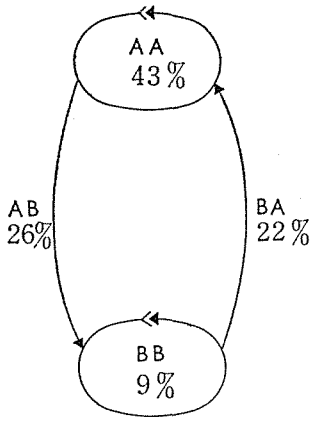
Next he showed us the indices of export volume from industrial countries and non-industrial countries (base year = 1928). In 1955 exports of industrial countries attained the level of 139, while the exports (excluding petroleum) from non-industrial countries only 118.5 (see Table 2).

Thirdly let us examine the percentage share of non-industrial countries in the value of world trade on Table 3. Exports from non-industrial countries excluding oil decreased from 32.2% in 1928 to 24.4% in 1957.

From these observations follow the two problems. The first is the problem why the percentage share of exports from industrial countries to each other in world trade increased so rapidly. The second problem is related to the decreasing share of non-industrial countries in the value of world trade. Here we want to deal with these two problems from the theoretical point of view.

TABLE 1 - TABLEAU ECONOMIQUE OF WORLD TRADE AT THE PRESENT TIME (1957)

Exports of:	
Industrial countries to each other (AA)	43%
Industrial countries to non-industrial countries (AB)	26%
Non-industrial to industrial countries (BA)	22%
Non-industrial countries to each other (BB)	9%
Total exports (excl. Soviet Area):	100%



Source: R. Nurkse, op. cit., p. 203.

TABLE 2 INDICES OF EXPORTS VOLUME (1928 = 100)

	1955	1957
Exports from industrial countries (a)	139	162
Exports from non-industrial countries (b)	138	151
of which: 1) petroleum	479	—
2) all other primary products	118.5	—

a) OEEC Europe, United States, Canada and Japan.

b) All other countries outside the Soviet Area.

Source: Trands in International Trade, Gatt, Geneva, 1958 from R. Nurkse, op. cit., p. 291.

TABLE 3 – PERCENTAGE SHARE OF NON-INDUSTRIAL COUNTRIES IN THE VALUE OF WORLD TRADE (a)

	Including oil exporting countries %		Excluding oil exporting countries %	
	1928	1957	1928	1957
Exports	33.8	31.3	32.2	24.4
Imports	28.0	35.0	26.9	30.4

(a) Excluding all Soviet - Area imports and exports.

The figures for imports as well as exports are based on f. o. b. values.

Source: Trends in International Trade, from R. Nurkse, op. cti. p. 292.

2) The Position of Adam Smith in the Theory of International Division of Labour.

Before dealing directly with these problems, first of all we must examine the classical theory of internatioal division of labour in the light of modern experience in world trade.

Let us begin with a rather neglected notion, that is to say, the idea of Adam Smith in this field of study. He criticized the mercantilist idea that the principal benefit of foreign trade was the importation of gold and silver, and he made it clear that it consists in the carrying out of surplus produce for which there is no demand and bringing back something which there is.

The importation of gold and silver is not the principal, much less the sole benefit which a nation derives from its foreign trade.

All the countries in which foreign trade is carried on, derive two distinct benefits from it. Foreign trade carries out that surplus part of the produce of their land and labour for which there is no demand among them, and brings back in return for it something else for which there is a demand. It gives a value to their superfluities, by exchanging them for something else, which may satisfy a part of their wants, and increase their enjoyments. By means of it, the narrowness of the home market does not hinder the division of labour in any particular branch of art or manufacture from being carried to the highest perfection. By opening a more extensive market for whatever part of the produce of their labour may exceed the home consumption, it encourages them to improve its productive powers, and to augment its annual produce to the utmost, and there by to increase the real revenue and wealth of Society:" (A. Smith, An Inquiry into the Nature and Causes of the wealth of Nations, Cannans edition, 1961, vol. 2, pp. 468–9).

He defines the role of foreign market as "vent for surplus," which extends the division of labour in home market.

According to him the scale of the market depends on the degree of division of labour. If a market is large, the division of labour is large to that extent. The existence of foreign market facilitates and encourages the development of the division of labour in home market, and thus augments the annual products of labour. In this sense his notion of "vent for surplus" is very dynamic. But on the other hand it lacks the exactnes of logic. He did

not explain the competitive conditions of international trade among countries.

3) The Examination of the Doctrine of Comparative Costs.

No theory can be so clear and rigorous as that of D. Ricardo, belonging to the English Classical School. He explained the logic of international division of labour with clarity and exactness.

"England may be so circumstanced, that to produce the cloth may require the labour of 100 men for one year; and if she attempted to make the wine, it might require the labour of 120 men for the same itme. England would therefore find it her interest to improve wine, and to purchase it by the exportation of cloth.

To produce the wine in Portugal, might require only the labour of 80 men for one year, and to produce the cloth in the same country, might require the labour of 90 men for the same time. It would therefore be advantageous for her to export wine in exchange for cloth.

This exchange might even take place, notwithstanding that the commodity imported by Portugal could be produced there with less labour than in England.

Though she could make the cloth with the labour of 90 men, she would import it from a country where it required the labour of 100 men to produce it, because it would be advantageous to her rather to employ her capital in the production of wine, for which she would obtain more cloth from England, than she could produce by diverting a portion of her capital from the cultivation of wines to the manufacture of cloth" (The works and correspondence of David Ricardo, ed. by Sraffa, vol. 1. p. 135).

According to Professor G. Haberler, in accordance with the relative costs, an exchange rate will be established in England of 1 unit of wine against 1.2 units of cloth, and in Portugal 9 units of wine against 8 units of cloth, that is to say 1 unit of wine against 0.88 units of cloth. Suppose now that trade takes place. It is clearly advantageous to Portugal to send wine to England, where a unit of it commands 1.2 units of cloth. Portugal will take to producing wine in stead of cloth. England, on the other hand, can obtain wine at much less expense by specialising upon the manufacture of cloth and exchanging the cloth with Portugal against wine. For Portugal there is a sufficient inducement to engage in international trade of 1 unit of wine commands a little more than 0.88 units of

cloth; for England, if a little less than 1.2 of cloth must be given for 1 wine. Hence any exchange ratio between 0,88 and 1.2 cloth against 1 wine represents a gain to both countries (C. Haberber, op. cit. p. 129).

This version of Ricardo's theory of comparative costs by Professor Haberler is inherited by many orthodox economists, such as Professor Harrod.

As the above-mentioned phrase shows us, Ricardo introduced the international comparison of costs in order to explain trade phenomena. His theory of comparative costs is rigorous in logic, but is a static one, which cannot clarify the development process of international trade. So we must take into consideration the dynamic character of A. Smiths theory, and correct the defects of D. Ricardo's theory.

2 - INTERNATIONAL DIVISION OF LABOUR BETWEEN INDUSTRIAL COUNTRIES

1) Preparatory works.

In all industrial countries market forms other than competition, that is to say, oligopoly, have become more and more dominant. So we had better begin with this market form, and consider the case of international division of labour under oilgopoly.

Let us suppose that the unit cost of automobiles and that of chemical goods is the same, for example, 20 in both countries, say Unites States of America and Germany.

SCHEMA 1

	Automobile unit cost	Chemical goods unit cost
U. S. A.	20	20
Germany	20	20

In this example, as a matter of fact, trade between the two countries does not take place.

Suppose now that in Germany oligopolistic competitions prevail and the structure of industry in Germany is as follows:

Number and size of firms	Output of each firm	Output of the group
20 small	100	2,000
2 medium	1,000	2,000
1 large	8,000	8,000
		12,000

Total output of 12,000 units represents the market size.

And let initial price be 20 and the elasticity of demand equal to unity.

We have borrowed this example from Professor Sylos - Labini's book "Oligopoly and Technical Progress" English edition 1962, (pp. 40–50), and later we shall modify it partially.

Let us consider the rate of profit over cost:

$$r = \frac{px - k - vx}{k + vx} \quad \cdots\cdots\cdots\cdots\cdots \quad (1)$$

where px is total revenue, k total fixed cost, and vx total variable cost, all expressed in

annual terms (Sylos-Labini, op. cit., p. 40).

Next Professor Sylos-Labini has introduced a new concept that is to say, the minimum profit rate, which establishes an important and well-defined limit to profit maximization, whether in the short or in the long run.

"To illustrate this point, let us suppose that a firm acquires all its factors of production with borrowed funds on which it pays 5 percent interest. The firm subsequently has an opportunity either to invest a further 100, which would yield a profit of 6, or a further 200, yielding a profit of 8. The absolute amount of profit is higher in the second case, but the profit rate of 4 percent compares with 6 percent in the first case. The current rate of interest being 5 percent, the enterpreneur can effect only such investments as yield him at least 5 percent and he will therefore not invest 200". (Sylos-Labini, op. cit., p. 42).

If this minimum profit rate is rm and we know the fixed cost, variable cost, and output of a given firm, the price corresponding to the minimum profit rate for that firm is:

$$pm\ x = rm\ k + rm\ vx + K,$$

or

$$pm = \left(\frac{k}{z} + v \right) (1 + rm) \quad \cdots\cdots\cdots\cdots\cdots \quad (2)$$

If the price leaders (monopoly firms) intend to prevent the entry of new firms of a given type, they must keep the price below the level which would give the new firms their minimum profit rate: the "entry-preventing price" pc is lower than pm.

Suppose that minimum profit rate, rm, is 5 percent, total fixed cost is 24,000, the average variable cost is 14 and total output is 8,000. Then we obtain the price, pm, corresponding to the minimum profit rate of 5 percent.

$$pm = \left(\frac{24{,}000}{8{,}000} + 14 \right) (1 + 0{,}05) = 17.8$$

But what is more important here is the entry-preventing price, pc. According to Professor Sylos-Labini, this entry-preventing or elimination price lies immediately below the average variable cost.

"If the price leaders intend to squeeze out existing firms, they must fix the price at a level below the variable cost of the firms they want to eliminate: a firm can survive for

some time if the price is so low that the fixed cost cannot be recouped, but it can remain in the market for only a relatively short period if the price falls below variable cost, requiring disbursements at short intervals. The "elimination price" is lower than the variable cost of the firms to be eliminated (pc 〈v). Strictly speaking, this is the short-run elimination price. In the long run, any price lower than pm for given type of firm will cause the firm gradually to abandon the market. In other words, the long-run elimination price coincides with the entry-preventing price" (Sylos-Labini, op. cit., p. 40).

2) International Division of Labour under Oligopoly

Our preparatory work being over, let us apply this structure of industry to German automobile industry. The three types of technology and hence three types of firms, in ascending order of intensity of fixed capital are shown in the table below.

Costs and Profits of German automobile industry

Output x	Fixed cost Total k	Average k/x	Average vatiable cost v	Total cost T=k+vx	Price x	Total rev. px	Profit total G=px	Profit per unit g	Profit rate % s=G/T
100	100	1	17.5	1,850	20	2,000	150	1.5	8.1
1,000	2,000	2	16	18,000	20	20,000	2,000	2	11.1
8,000	27,000	3	14	136,000	20	160,000	24,000	3	17.6

Let us suppose that the large firm in German automobile industry wants to eliminate the small firms. The alimination price, pc, is 17.4, because the average variable cost of the small firms is 17.5. Then the large firm can obtain only the unit profit 0.4 (17.4−17=0.4). In order to retain the initial total profit (24,000), the large firm must increase its output to 60,000 (24,000 ÷ 0.4). So the large firm must expand its output capacity by investment. After the expansion of its output capacity, the intensity of fixed capital in the large firm augment, and the variable cost diminishes. Let the total fixed cost of the large firm 240,000, and its variable cost 12. Then the unit profit of the large firm in German automobile industry will become 1.4 (17.4−16) instead of the former 0.4. Thus the large firm in German automobile industry can maximize its total profit, increasing its profit rate. In this sense we cannot agree with the notion of minimum profit rate introduced by Pro-

fessor Sylos-Labini.

Now after the elimination of the small firms, the large firm occupies their market share (2,000). The initial output of the large firm was 8,000, and so, on balance, the large firm must seek the vent of 50,000 units of cars (60,000 — [2,000 + 8,000]. This situation gives rise to large scale of export drive from Germany.

Now the initial schema can be changed as follows:

SCHEMA 2

	Automobile unit cost	Cnemical goods unit cost
U. S. A.	20	20
Germany	17.4	20
	relative cost	
U. S. A.	1	1
Germany	1.15	1

Germany can export her automobile to the United States and imports chemical goods. Trade between the two countries can take place from more than 1 unit of chemical goods to less than 1.15 units of automobiles.

After the elimination of the small firms, the unit car price of the large firm in Germany tends to increase to 18. If the large firm in German automobile industry augment its unit price up to 20, it cannot compete with the medium-sized firms. At the price level of 18 in German automobile industry, medium-sized firms can gain nothing, and so they must cut the wage-level: In this case the large firm in German automobile industry cannot eliminate the medium-sized firms, for the average variable cost of the latter is 16, which is equal to the average cost of the large firm.

After the elimination of the small firms the unit price of German automobile tends to increase up to 18.

$$17.4 \longrightarrow 18$$

Let us call this increase of price the setback process.

Next let us examine the case of the chemical industry in Germany. In the chemical industry the intensity of fixed capital in the small firms is higher than the case of automobile industry. So the average variable cost of the small firms is smaller than the case of

automobile industry. Therefore the oligopolistic competition is more intense than the case of automobile industry.

Let the total fixed cost of the small firms 150 and its average cost 17. 3. Then we have the following table.

Cost and profits of German Chemical Industry.

Output	Fixed Total K	cost. average k/x	Average variable cost	Total cost T=k+vx	Price P	Total revenue px	Profit Total G=px=	Profit per unit g	Profit rate (%) S=G/T
100	150	1.5	17.3	1,880	20	2,000	170	1.2	6.4
1,000	2,000	2	16	18,000	20	20,000	2,000	2	11.1
8,000	24,000	3	14	136,000	20	160,000	24,000	3	17.6

In this case the elimination price, pc, is 17.2 (17.3 > 17.2). So in order to retain the initial total profit, the large firm must expand its output up to 120,000 (24,000÷0.2= 120,000). This amount of output may be beyond the present capacity, which urges large firm to invest new capital. After its investment the intensity of fixed capital increases, and the average variable cost decreases. Let the new average fixed cost of the large firm be 5 instead of 3, and its average variable cost 10.5 instead of 14.

Costs and Profits of The Large Film After New Investment in German Chemical Industry

Output x	Fixed Total k	Cost Average K/x	Average variable cost v	Total cost T=k+vx	Price P (a)	Total revenue px	Profit Total G=px−T	Profit Per unit g	Profit rate (%)
120,000	100,000	5	10.5	1,280,000	17.2	2,064,000	784,000	1.7	10.9
					15.9 (b)	1,908,000	618,000	0.4	2.4
					20	2,400,000	1,120,000	4.5	29·0

(a) before elimination

(b) after elimination

Since the new average cost of the large firm is 15.5 (5+10.5=15.5), it can also eliminate the medium-sized firms after driving the small firms out of market. In order to

eliminate the medium-sized firms, the large firm has only to lower its price down to 15.9, because the average variable cost of the medium-sized firms is 16. After the elimination of the two types of firms, the large firm can raise its price up to 20, which enables it to secure the maximum profit. With the initial price 20 new entry becomes possible, and again new price war begins between the large firm and new firms.

Now let us remember that the initial market share of the small firms is 2,000. After the elimination of the small firms, the large firm must seek the vent of 110,000 units of chemical goods [120,000−(2,000+8,000)]. In the case of the second stage of elimination, that is to say, after the elimination of the medium-sized firms, the large firm must export 90,000 units of chemical goods [120,000−(2,000+8,000)]. In either case the amount of exports in chemical industry is larger than in automobile industry. In the case of chemical industry the oligopolistic competition is more intense. This means that the more violent the oligopolistic competition becomes, the more the large firm seek foreign market (110,000～90,000 > 550,000).

Now the schema 2 can be changed as follows:

SCHEMA 3

	Automobile unit cost		Chemical goods unit cost
U. S. A.	20		20
Germany	17.4		15.9
	relative cost		
U. S. A.	1	=	1
Germany	1	=	1.09

As a matter of fact, Germany exports chemical goods in exchange for automobiles.

While the large firm in chemical industry is eliminating the two types of firms, the set-back process is taking place in the automobile industry. Let the unit price of German automobiles be 18 instead of 17.4. Then Schema 3 can be changed as as follows:

SCHEMA 4

	Automobile unit cost	Chemical goods unit cost
U. S. A.	20	20
Germany	18	15.9

	relative cost		
U. S. A.	1	=	1
Germany	1	=	1.13

Schema 4 shows us that, after the setback process in German automobile industry is complete, the gains from trade increases from 1.09 to 1.12. This means that, after the monopoly price is established in German automobile industry, the gains from trade is larger than Schema 3 so long as the large firm in German chemical industry maintains its eliminating price 15.9. On the contrary the setback process is complete, and the large firm raises its price up to 20 (15.9 ⟶ 20). Then the large firm, that is to say, the monopoly firm in German chemical industry can no longer export its goods.

Schema is now changed as follows:

SCHEMA 5

	Automobile unit cost	Chemical goods unit cost
U. S. A.	20	20
Germany	18	20

	relative cost		
U. S. A.	1	=	1
Germany	1.11	=	1

After the setback process is complete, the monopoly firm in German chemical industry must lower its export price under 18 artificially. This situation gives rise to double-price system, export bounties and othen state subsidies.

3) The Summary of this chapter.

Now we want to summarize our arguments in this chapter as follows.

1. – The more oligopolistic competition prevails in industries, the more the large firms seek foreign markets. This explains why exports of industrial countries to each other increase very rapidly.

2. – The larger the time interval of setback process, the larger the opportunity for international trade becomes.

3. – So far we have supposed the elasticity of demand to be unity. This is justified so

far as the industrial goods are concerned. But in the period of recession when the demand for industrial goods decreases, Germany in our example must be forced to reduce her export price lower than in prosperity period. At the same time the large firm in Germany wants to strengthen the monopoly control over her home market.

4. – In our simplified example we have supposed that the costs of both goods in the United States are constant. This may be an unrealistic assumption. But we wanted to make our arguments clear-cut and simple. We believe that this assumption might not harm our arguments in this chapter.

3 - INTERNATIONAL DIVISION OF LABOUR BETWEEN INDUSTRIAL AND NON-INDUSTRIAL COUNTRIES.

1) The Problem Stated

The problem with which we want to deal in this chapter is an old and new one. This is an old problem in this sense that we find so many articles and books about this problem in the field of economic development. We might say this is a new problem, because a theoretically adequate solution of the problem has yet to come.

As in the case of the previous chapter this problem is studies from purely theoretical points of view, and the readers are requested to follow the logic with patience.

As Dr. M. K. Atallah points out, the poorer countries have decided to raise their standard of living, and are on the way of industrializing their countries.

"Since the second World war, when most of the underdeveloped countries have discovered the differences between their economic conditions and the standard of living prevailing in the developed countries, and decided to decrease this gap by the development of their economies, a further aspect has been added to this problem: because all programs of economic development require large amounts of capital goods attainnable in the advanced countries and must be exchanged as far as no capital imports take place for exports of primary products. The ability of the underdeveloped countries to acquire these goods depends, therefore, on the relation between the prices of their exports of primary products and the prices of their imports of capital goods" (M. K. Atallah, The Long-term Movement of the Terms of Trade between Agricultural and Industrial Products, 1958, P. 1)

According to Dr. Atallah, the underdeveloped countries must acquire capital goods in exchange for their traditional primary products (so for as they get no capital imports). But this is not always a true picture. Some of the underdeveloped countries have built light industries such as textiles and are exporting the new products as in the case of India Pakistan, etc.

Professor R. Nurkse told us that this type of industrialization would be favorable on the following reasons:

"Industrialization for export would seem an attractive solution in that it avoilds the need for carryng out any drastic and painful reform or "revolution" in domestic agriculture, under physical conditions that may be in any case unpropitions for agricultural improvement" (R. Nurkse, op. cit., p. 309).

As we have just seen in the previous chapter, the producers in home market can find its vent for surplus to foreign market. If the underdeveloped countries avoids carrying out any reforms in domestic agriculture, their home markets become narrower, because agricultural inhabitants occupy the large part of population and their annual income is so low.

So in this case industrialization must of necessity seek export market, for home market is narrow in the sense that agricultural sector can only absorb a portion of home-manufactured goods. We want to emphasize the fact that industrialization for export market and domestic agriculture without any drastic land reform are coexistent in underdeveloped countries.

In this chapter we want to examine what kind of international division of labour the underdeveloped countries starting light industries must confront.

2) The New Type of International Division of Labour between Industrial and Non-industrial Countries.

Let the typical industrial country be the United States of America, and the typical developing country be Pakistan in our example.

The unit of agricultural product is 90 in the United States and 60 in Pakistan. The unit of textiles is 70 in the United States and 100 in Pakistan.

SCHEMA 1

	Agricultural products unit cost		Textiles unit cost
U. S. A.	90		70
Pakistan	60		100
	relative cost		
U. S. A.	0.77	=	1
Pakistan	1.51	=	1

If trade takes place between the two countries, United States can obtain more than 0.77 units of agrioultural goods in exchange for 1 textiles. On the other hand Pakistan can get 1 unit of textiles in exchange for less than 1.51 units of agricultural goods. This international division of labour is an traditional type explained by the orthodox economists.

Now let us advance our argument further.

It is needless to say that economic development ensues the structural change in industry. Let us suppcse that the center of industrial activity has passed from light industries such as textiles to heavy industries such as machinery in the United States. The unit cost of machinery is 50 and that of textiles remains the same in the United States, where oligopoly has become the dominant pattern of industry. On the other hand the development of textile industry in Pakistan now collides against the narrowness of home market.

Schema 1 can now be changed as follows:

SCHEMA 2

	Machinery	Textiles
U. S. A.	50	70
Pakistan	500	100

Now let us suppose that the cost structure of the textile industries in both countries are as follows:

	Output x	Fixed Total k	cost Average k/x	Average variable cost	Total cost
U. S. A.	1,000	20,000	20	50	70
Pakistan	1,000	15,000	15	85	100

The cost of textiles is represented by the monopoly firm in the United States, while competition is prevalent in the textile industry of Pakistan and its cost is an average of the firms.

As we have studied in the previons chapter, the textile industry of Pakistan cannot compete with that of the United States unless the former lowers the cost below the average variable cost of the United States, 50. The textile industry of Pakistan must cut its

average variable cost down to 34 (15 + 34 = 49).

Usually the cost of living in developing countries is far below that in developed countries. So the average variable cost can be lowered down to 34 so far as the textiles in Pakistan can be exported and consequently the employment in modern industrial sectors increases.

Now Schema 2 can be changed as follows.

SCHEMA 3

	Machinary cost		Textiles cost
U. S. A.	50		70
	Agrioultural products		
Pakistan	60		49
	relative cost		
U. S. A.	1.4	=	1
Pakistan	0.83	=	1

As a matter of fact the United States can export machinery in exchange of textiles. This exchange of goods is carried on by comparative costs, not by necessity with which developing countries are confronting.

But this type of international division of labour does not mean the end of our argument. Professor Nurkse has brought a problem before us:

"Just as textiles are usually the first manufactures to be started in the poorer countries, so also textiles are among the first to become sick industries in the more advanced countries where workers as well as managers are quick to raise protest against "unfair" low-wage competition from backward areas. The pauper-labour argument, that great stand by of protectionists, is brought forward again. Charges of 'social dumping' are heard, even though the newcomers are only trying to make use of their one advantage: ample labor and cheap efficiency wages, an advantage which, as just observed, can be hard enough for them to make effective" (Ragnar Nurkse, Op. cit. p. 312).

As Professor Nurkse points out rightly, the new export industries of developing countries often encounter the strong obstructions from the established industries in developed countries. So the developing countries cannot usually specialize their resources on their new

industries. Therefore in this case the doctrine of comparative costs only works in a limited extent.

As Dr. Atallah observed, *developing countries require large amounts of capital goods to* industrialize their economies. If they cannot specialize their resources on their new export industries, other goods must be exported as complementary.

Let us observe Schema 3. In this example Pakistan cannot export agricultural products unless she lowers the cost down to 49. Then the relative cost between agricultural products and textiles become 1 = 1.

Schema 3 can now be changed as follows:

SCHEMA 4

	Machinery Unit cost		Textiles Unit cost
U. S. A.	50		70
	Agricultural Products		
Pakistan	49		49
	relative cost		
U. S. A.	1.4	=	1
Pakistan	1	=	1

In Schema 4 the United States can export machinery in exchange for both textiles and agricultural products. This example shows us that developing countries cannot export their goods unless they lowers their costs below the normal level.

3) The Summary of this chapter.

In many literatures which deal with economic development of non-industrial countries, authors discuss the terms of trade of developing countries without concrete results.

Our example has brought a solution to this problem: it is completely impossible to solve the problem only with the terms of trade index, because, as we have just observed in our example, the developing countries must lower the costs before exporting. Otherwise developing countries could not export their goods. In developing countries lowered costs correspond with prices which can be measured statistically. So the terms of trade in developing countries are not sufficient to reflect the reduced costs of export industries.

Next we want to emphasize another important point. In our example Pakistan has become an exporter of both the goods, agricultural products and textiles. This means that in developing countries new industries tend to be exported. We have explained this situation by the fact that home market in developing countries is narrow and there always exists the necessity to import capital goods. Here, as is shown in Schema 3 and 4, the doctrine of comparative doctrine must be modified in the light of our present experience in international trade. This is why we have called this pattern as the new type of international division of labour between industrial and non-industrial countries.

4 - CONCLUSION

Starting from historical realities with which we are confronted today, we have dealt with the two problems from the theoretical point of view: international division of labour between industrial countries to each other under oligopoly, and that between industrial and non-industrial countries under the same condition.

As we have observed in Preface of this essay, any theoretical treatment of international division of labour under the condition of oligopoly has not been successfully made. We have tried to solve the first problem with the aids of theoretical models from Professor Sylos-Labini ; international division of labour between industrial countries to each other under oligopoly.

We have explained why trade between industrial countries to each other should increase so rapidly. The behavior of oligopolistic firms must of necessity seek the vent for surplus to foreign market.

The second problem is related to international division of labour between industrial and non-industrial countries. We have pointed out that in developing countries the new industries such as textiles must find its export market just after startihg. The home market in developing countries is so narrow (of course we use the term "narrownese" in relative sense) that developing countries are forced to find their export markets. But they cannot succeed in exporting unless they cut the costs of their new industries to the level which may enable them to compete with the old established industries in developed countries. This logic explains the reason why in developing countries the wage level of modern industries should be lower. In connection with this problem we must mention that the goods of new industries in developing countries tend to be exported. We have called this phenomenon a new type pf international division of labour between industrial and non-industrial countries. We want to verify this problem statistically in future.

5 - BIBLIOGRAPHY

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（本稿は、筆者のイタリア留学中における研究成果の一部分である。）